DOCUMENT RESUME

ED 224 967 CE 034 764

AUTHOR Vos, Robert; And Others
TITLE Adolescents' Attitudes toward Vocational Education.
PUB DATE Nov 82
NOTE 22p.; Paper presented at the Annual Meeting of the Mid-South Educational Research Association (11th, New Orleans, LA, November 1982).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Attitude Measures; Blacks; College Preparation; *Disadvantaged Youth; *Educational Attitudes; Females; General Education; Grade 8; Hispanic Americans; Junior High Schools; Junior High School Students; Males; *Racial Differences; Secondary Education; *Sex Differences; *Student Attitudes; *Vocational Education; Whites
IDENTIFIERS *New Jersey (Hudson County)

ABSTRACT

Attitudes of eighth graders toward vocational education were measured, and the relationship of these attitudes to high school educational program preference (vocational, general, or college preparatory) was determined. The study was also designed to ascertain differences on the basis of disadvantagement, race, and sex. Subjects were 306 students from Hudson County, New Jersey. A 42-item questionnaire was developed to measure attitudes toward vocational education. Part 1 was a Likert-type summated rated scale; part 2 was a forced-choice multiple-choice section. Attitudes of males and females as well as Black, Hispanic, and White adolescents toward vocational education did not differ significantly. Differences occurred between disadvantaged and nondisadvantaged youth. Nondisadvantaged youth had a more favorable attitude toward vocational education. All participants perceived vocational education with a positive attitude. Disadvantaged youth, even though they had a lower attitude score, indicated a greater preference for the vocational program than did white youth. Male youth indicated a greater preference for the vocational program than did female youth. No difference in attitude scores was shown among the youth selecting the vocational, general, or college preparatory high school programs. Conclusions suggested barriers to participation are not directly related to attitudes of disadvantaged youth. (YLB)

**********
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
**********

ED224967

# ADOLESCENTS' ATTITUDES TOWARD VOCATIONAL EDUCATION

A Paper Presented at the
Eleventh Annual Meeting of the
Mid-South Educational Research Association

New Orleans, LA

November, 1982

by

Robert Vos, Ed.D.

Dennis G. Tesolowski, Ed.D.

Thurman R. Hux, Ed.D.

Division of Vocational Education
Florida International University
Miami, Florida 33199

CE034764

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

✓ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

R Vos

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

## ABSTRACT

## Statement of the Problem

The primary purposes of this investigation were to measure attitudes of eighth grade adolescents toward vocational education and to determine if they had significantly different preferences for vocational, general or college preparatory programs. This study was designed to ascertain differences on the basis of disadvantagement, race and sex.

## Significance of the Study

Attitudes of disadvantaged youth toward vocational education have been identified as a deterent to their selecting vocational education as a viable option. Literature on this topic has been inconclusive and conflicting. A greater understanding of these attitudes could lead to more effective recruitment efforts and improved delivery systems.

## Summary of Procedures and Statistical Models Employed

Subjects included in this study were 306 eighth grade students from an urban city and 174 eighth graders from a suburban community in the Northeastern United States. Randomly selected classes were utilized at seven different schools. Demographic variables such as race, ethnicity and sex indicated that the sample represented the total population.

A 42-item questionnaire was developed to measure attitudes toward vocational education. Part I of this instrument was a Likert-type summated rated scale and Part II was a forced-choice multiple-choice section. Only those 17 items on the attitude

scale that pertained directly to vocational education were used to derive the attitude score.

The instrument's technical characteristics of reliability and validity were calculated. An internal consistency coefficient of .87 and split-half coefficient alphas of .76 and .85 were derived for the questionnaire. Criterion groups were utilized to determine construct validity. A t-value of 4.41 ($p < .01$) distinguished that groups responding to the scale were drawn from different populations.

Attitudes of the following groups toward vocational education were compared by utilizing a 2x3x2 factorial design and N-way ANOVA: (a) disadvantaged and nondisadvantaged; (b) Black, Hispanic and White; and (c) male and female. A Chi Square procedure was applied to the identical groups to determine if there were any differences in program preference of high school adolescents. ANOVA applied to a one-way factorial design was used to analyze differences in attitude toward vocational education among youth with a preference for vocational, general, or college preparatory programs.

## Summary of Results

Attitudes of males and females and Black, Hispanic and White adolescents toward vocational education did not differ significantly. However, significant differences at the .01 level occurred between disadvantaged and nondisadvantaged youth. Furthermore, no attitudinal differences were identified in relationship to program for vocational, general, or college preparatory programs. All participants perceived vocational education with a positive attitude.

# ADOLESCENTS' ATTITUDES TOWARD VOCATIONAL EDUCATION

by

Robert Vos, Dennis G. Tesolowski, Thurman R. Hux

Vocational Education has long been recognized for its facility in increasing the overall relevancy of school to disadvantaged youth. Vocational education has been shown to be a vehicle for preventing early dropouts, fostering positive attitudes toward work, encouraging school attendance, and improving behavior (Parsons, 1967). According to Gordon (1969) the content and conditions of vocational education provide excellent opportunities for the improvement of learning efficiency for disadvantaged youth. The National Advisory Council on the Education of Disadvantaged Children points to the role vocational education holds for disadvantaged youth by emphasizing the need for more sensory and motor experiences dealing with concrete objects before proceeding to abstract learning (Research and Policy committee of the Committee for Economic Development, 1971). A recurring enigma, however, has been the lack of participation of disadvantaged youth in high school vocational programs.

In recognition of the concern social scientists and vocational educators have had for serving the disadvantaged, Congress specifies that research funds should be appropriated "... to meet the special vocational education needs of youths, particularly youths in economically depressed communities who

have academic, socio-economic, or other handicaps that prevent them from succeeding in regular vocational education programs" (Vocational Education Act of 1963, PL 88-210, p. 3). State and federal expenditures for disadvantaged youth in 1975 alone surpassed $244 million dollars (Summary Data Vocational Education, 1975). Yet, these funds have in general not produced significant results in encouraging disadvantaged youth to access vocational education programs.

The National Advisory Council on Vocational Education in their Third Report (1970) called attention to attitudes of disadvantaged youth and its relationship to vocational education by stating:

> Among minority groups there is a well founded suspicion that counselors, especially majority-group counselors, are influenced by a conviction that minority youth are fit only for the more menial occupations. Because minorities are underrepresented in many occupations, they are also underrepresented on vocational faculties, whose majority-group image is forbidding to them. (Reports of the National Advisory Council on Vocational Education 1969-1972, p. 12).

The Advisory Council advised that:

> In time, this attitude may be overcome, this suspicion proved unjustified, and this image replaced. In this decade, however, these are factors which no one planning vocational education can ignore. There are some vocational facilities which are under-utilized because they were planned for, but not with, their clientele. Vocational education will not succeed in attracting the clientele which can profit most from it unless it involves that clientele in its planning and direction. (p. 12)

On the other hand, Black (1976) in a study that attempted to determine educational and school-related attitudes

of Black inner-city junior high school youth and to compare these attitudes to their White counterpart found no significant difference in attitude. He concluded that vocational education does not suffer from poor public image in the socio-economic levels studied, indicating unrecognized barriers to participation. Subsequent research (Simcoe, 1979) seems to support this contention.

Despite the importance of examining the attitudes of disadvantaged youth and determining their relationship to participation in vocational education, studies have been inconclusive in this area.

## PURPOSE OF THE STUDY

The purpose of this study is threefold: 1) to determine the attitudes of disadvantaged eighth grade youth toward vocational education, 2) to determine the relationship of these attitudes to high school educational program preference, and 3) to determine if there are significant differences in attitude toward vocational education among Black, Hispanic, and White disadvantaged and non-disadvantaged eighth grade youth.

## IMPLICATIONS OF THE STUDY

The research is inconclusive about the attitudes of disadvantaged youth and how their attitudes relate to educational program choice--knowing such information may make it possible to improve vocational education delivery systems designed to serve the disadvantaged population. Services such as public relations programs, recruitment, and career guidance are all potential benefactors of this knowledge. Wenrich and Crowley

(1964) in their study "Vocational Education as Perceived by Different Segments of the Population" state:

> If the Vocational educator has more exact information about the perception of his program, then he should be able to administer it that much more effectively. With such knowledge he has at least two courses of action open to him. One is to accept the image and to bring his high school program more in alignment with it than at present; the other is to try to modify the image by techniques available in the literature (p.3).

It is the belief of these researchers that knowing the attitudes toward vocational education of eighth grade youth will aid educators in developing strategies for increasing participation in high school vocational programs.

## STATEMENT OF THE HYPOTHESES

In order to explore the primary objective of this study the following hypotheses have been formulated:

$H_{o1}$ There is no significant difference in the attitudes of eighth grade (a) disadvantaged and non-disadvantaged (b) Black, Hispanic, and White, and (c) male and female youth toward vocational education.

$H_{o2}$ There is no significant difference in the high school program preference of (a) disadvantaged and non-disadvantaged youth, (b) Black, Hispanic, and White, and (c) male and female youth.

$H_{o3}$ There is no significant relationship between attitude toward vocational education and stated preference of high school program.

## LIMITATIONS OF THE STUDY

The study was limited to eighth grade junior high school students from Hudson County, New Jersey. Generalization of the results is limited to the extent that the subjects are typical of students enrolled in eighth grade classes in similar urban schools. The conclusions reached in the analysis are applicable to the sample and limited to the period of time in which the study was conducted.

As in all studies requiring a self-report, the study is limited by the assumption that the responses to the items on the High School Attitude Scale reflect an honest overall attitude of favorableness/unfavorableness toward vocational education in the high school.

## METHODOLOGY

An attitude scale (see Appendix) designed to measure attitudes toward vocational education was constructed. Content validity of the High School Attitude Scale was achieved by selecting the questions in such a manner that they are a representative sample of the universe of the content that the Scale is designed to measure. A pool of items to be used in the High School Attitude Scale was evaluated by a panel of ten experts who determined whether the individual items measured the construct "attitude." Those items that at least seven of the panel agreed upon as a measure of a person's attitude were retained for the Scale. Suggested changes and additions were considered and used in the final Scale.

Construct validity of the High School Attitude Scale was determined by the use of criterion groups. The Scale was administered to fifteen students of a sophomore class of vocational students and twenty-four students of a sophomore class of non-vocational students. To be a true measure of attitude toward vocational education, significantly different scores for these two groups were expected. Comparing the scores of the non-vocational students with the scores of the vocational students produced a $t$ value of 4.1 ($p < .01$). The students who responded to the High School Attitude Scale appear to have been drawn from different populations.

In an effort to eliminate reading ability as an intervening variable, the reading level of the Scale was kept below the tested reading level of the subjects. The Fry Readability Graph (1968) and the Gunning Fog Index (1952) readability indices were applied to three separate samples of the High School Attitude Scale. A mean grade reading level of 5.8 was achieved by using the Fry Graph and 4.4 by using the Gunning Index. The grade reading levels are substantially lower if computed without the words "vocational education" due to the fact that each of the indices relies on the number or percentage of syllables in the passage used. A mean grade reading level of 3.3 and 3.5 was achieved on the Fry Graph and Gunning Index, respectively with these words eliminated.

After the initial pool of items was constructed, the order randomized, and approximately half the items positively and negatively worded, a pilot sample of 33 eighth-grade youth completed the 39-question Scale. Reliability was determined for the data gathered from the pilot study by using Model Split of the SPSS Reliability program (Nie, et.al., 1975). A reliability coefficient of 0.81 was observed with the Scale. Split-half coefficients produced alphas of 0.76 and 0.85 respectively. Eliminating those items that had either a negative or low correlation (0.12 or less) with the entire scale produced a 30-item Scale. A reliability coefficient of 0.87 was observed with the new scale with the split-half coefficients remaining virtually the same.

## SAMPLE

The sample consisted of 306 eighth grade youth from Hudson County, New Jersey. The subjects ranged in age from 13 to 16, were both male and female, disadvantaged and non-disadvantaged, Black, Hispanic and White (Table 1). Intact classes were utilized at seven different schools.

Educationally disadvantaged youth were identified using the following criteria:

> The student must be at least two years behind grade level in computational and communication skills as measured on the "Stanford Achievement Test of Academic Skills."
>
> The student must be enrolled in a Compensatory Education Program. (Programs which provide instructional or related services over and above the regular school program. These programs are designed to improve the level of pupil proficiency in the basic areas of communication and computational skills.)

TABLE 1

DISTRIBUTION OF THE SAMPLE
(N = 306)

| Race | Male n (%) | Female n (%) | Disadvantaged n (%) | Nondisadvantaged n (%) |
|---|---|---|---|---|
| Black | 89(29.1) | | 67(21.9) | 22( 7.3) |
| | | 78(25.5) | 26( 8.5) | 52(16.9) |
| | | | 93(30.4) | 74(24.2) |
| Hispanic | 64(20.9) | | 38(12.4) | 26( 8.5) |
| | | 22( 7.2) | 4( 1.3) | 18( 5.9) |
| | | | 42(13.7) | 44(14.4) |
| White | 27( 8.8) | | 13( 4.2) | 14( 4.6) |
| | | 26( 8.5) | 3( 1.0) | 23( 7.5) |
| | | | 16( 5.2) | 37(12.1) |
| Total | 180(58.8) | 126(41.2) | 151(49.3) | 155(50.7) |

*All percentages are percent of the total sample.

The eighth grade was selected for study because it is an important time in the career development of youth, as it is in this grade that youth enter the developmental stage for making their first career related choices. In many communities, students must formally apply to the vocational school by the end of the eighth grade. The eighth grade was also selected because the students are generally not already engaged in the vocational, general, or college preparatory high school programs.

The data were gathered during the Fall of 1979. The Scale was self-administering and was distributed and presided over by the classroom teacher and/or guidance counselor who read instructions from a prepared script. Students were allowed to ask questions about the mechanics of completing the questionnaire but not about the nature of the research.

## FINDINGS

The results of the analysis of variance of the attitude scores are shown in Table 2. Based on this analysis, a statistically significant difference was found between disadvantaged and nondisadvantaged youth ($F = 14.10$, $p < .01$). No statistically significant difference was shown between male and female youth and Black, Hispanic, and White youth. To estimate the magnitude of the effect, a confidence interval has been constructed for $H_{o_{1a}}$ (Table 2).

TABLE 2

ANALYSIS OF VARIANCE OF DISADVANTAGEMENT, SEX, AND RACE

| Comparison Group | df | ss | ms | F Statistic | Confidence Interval |
|---|---|---|---|---|---|
| Disadvantagement (A) | 1 | 870.641 | 870.641 | 14.10* | $C[1.610 \leq \Psi \leq 5.138] = .95$ |
| Sex (B) | 1 | 154.230 | 154.230 | 2.50 | |
| Race (C) | 2 | 118.604 | 59.302 | .96 | |
| A x B | 1 | 3.086 | 3.086 | .05 | |
| A x C | 2 | 86.509 | 43.254 | .70 | |
| B x C | 2 | 4.387 | 2.193 | .04 | |
| A x B x C | 2 | 126.886 | 63.443 | 1.03 | |
| Error (Residual) | 294 | 18151.052 | 61.738 | | |
| Total | 305 | 19515.388 | | | |

*$p < .01$.

It was found that the high school program preference of disadvantaged youth was significantly different ($\chi^2 = 15.79$; $p < .01$) from that of the nondisadvantaged youth (Table 3). No significant difference in program

TABLE 3

COMPARISON OF HIGH SCHOOL PROGRAM PREFERENCE AND DISADVANTAGEMENT

| Program Preference | Group | | Row Totals n (%) |
|---|---|---|---|
| | Disadvantaged n (%) | Nondisadvantaged n (%) | |
| Vocational | 30( 9.84) | 14( 4.59) | 44(14.43) |
| General | 18( 5.90) | 32(10.49) | 50(16.39) |
| College Preparatory | 42(13.77) | 27( 8.85) | 69(22.62) |
| Not Sure | 61(20.00) | 81(26.56) | 142(46.56) |
| Column Totals | 151(49.51) | 154(50.49) | 305(100.0)[a] |

$\chi^2 = 15.79$; $p < .01$.

[a]Missing data for one subject.

preference was found among Black, Hispanic, and White youth (Table 4) or between male and female youth (Table 5).

TABLE 4

COMPARISON OF HIGH SCHOOL PROGRAM PREFERENCE AND RACE

| Program Preference | Race | | | Row Totals n (%) |
|---|---|---|---|---|
| | Black n (%) | Hispanic n (%) | White n (%) | |
| Vocational | 27( 8.85) | 11( 3.61) | 6( 1.97) | 44(14.43) |
| General | 23( 7.54) | 13( 4.26) | 14( 4.59) | 50(16.39) |
| College Prep. | 41(13.44) | 19( 6.23) | 9( 2.95) | 69(22.62) |
| Not Sure | 76(24.92) | 42(13.77) | 24( 7.89) | 142(46.56) |
| Column Totals | 167(54.75) | 85(27.87) | 53(17.38) | 305(100.0)[a] |

$\chi^2 = 6.07$; $p = .4149$.

[a]Missing data for one subject.

TABLE 5

COMPARISON OF HIGH SCHOOL PROGRAM PREFERENCE AND SEX

| Program Preference | Sex | | Row Totals n (%) |
|---|---|---|---|
| | Male n (%) | Female n (%) | |
| Vocational | 28( 9.21) | 16( 5.26) | 44(14.47) |
| General | 34(11.18) | 16( 5.26) | 50(16.45) |
| College Preparatory | 41(13.49) | 27( 8.88) | 68(22.37) |
| Not Sure | 76(25.00) | 66(21.71) | 142(46.71) |
| Column Totals | 179(58.88) | 125(41.12) | 304(100.0)[a] |

$\chi^2 = 3.87$; $p = .2759$.

[a]Missing data for two subjects.

In an effort to determine the strength of the relationship of the variables in Table 3, Cramer's V statistic was determined for the chi-square value. The Cramer's V value is .15, which indicates a significant difference in program preference between disadvantaged and nondisadvantaged youth, although the difference cannot be assumed to be strong.

The one-way analysis of variance shows no statistically significant difference in attitude score among those youth selecting either the vocational, general, or college preparatory high school program (Table 6).

TABLE 6

ANALYSIS OF VARIANCE OF ATTITUDE SCORE AND HIGH SCHOOL PROGRAM PREFERENCE

| Comparison Group | df | ss | ms | F Statistic |
|---|---|---|---|---|
| Program Selection | 3 | 186.952 | 62.317 | .98 |
| Error (Residual) | 301 | 19212.208 | 63.828 | |
| Total ss | 304 | 19399.161 | | |

## CONCLUSIONS and RECOMMENDATIONS

The findings of this study would seem to justify the following conclusions:

1. All youth studied appear to have a mildly positive attitude toward vocational education.

2. Nondisadvantaged youth have a more favorable attitude toward vocational education than do disadvantaged youth.

3. Males and females have a similar positive attitude toward vocational education.

4. Black, Hispanic, and White youth have a similar positive attitude toward vocational education.

5. Disadvantaged youth, even though they have a lower attitude score, indicate a greater preference for the vocational program than do nondisadvantaged youth.

6. Black and Hispanic youth indicate a greater preference for the vocational program than do White youth.

7. Male youth indicate a greater preference for the vocational program than do female youth.

8. No difference in attitude score was shown among the youth selecting the vocational, general, or college preparatory high school programs.

The conclusions lend evidence to alternative explanations for low participation rates. Perhaps barriers exist that are not directly related to the attitudes of disadvantaged youth. For example, many vocational programs are over subscribed with entry contingent on performance in the academic area (eg., basic skills). In any case, the indications are that attitudes at the eighth grade level may not be a significant factor.

Given these conclusions, the authors recommend the following:

1) that additional research be initiated at a different grade level, and
2) that other barriers to participation (eg., entry requirements, transportation, shop fees, occupational status) be examined for their importance.

## REFERENCES CITED


Black, M.S. Student attitudes toward vocational education. Columbus: Ohio State University, 1976.

Davenport, L.F. "Career education--expanded options for all students." Proceedings from National Conference on Career Education: Implications for Minorities. Washington: U.S. Office of Education, 1973.

Ellis, M.L. "A report to the nation on vocational education." Project Baseline. Flagstaff, Arizona: Northern Arizona University, November, 1975.

Fry, E.A. "A readability formula that saves time." Journal of Reading, 1968, 11, 513-516.

Gordon, E.W. "Characteristics of socially disadvantaged children." Review of Educational Research. 1965, 35, 377-388.

Jensen, R. "Equal access to vocational education." Proposal for federal funding. New Brunswich, N.J.: Rutgers University, 1978.

Lockette, R. and Davenport, L. Review and synthesis of research on vocational education for the urban disadvantaged. Columbus, Ohio: ERIC Clearinghouse on Vocational and Technical Education/Center for Vocational and Technical Education, 1971.

Nie, N.H., Hull, C.H., Jenkins, J.G., Steinbrenner, K., and Bent, D.H. Statistical package for the social sciences. (2nd ed.) New York: McGraw-Hill, 1975.

Parsons, J.L. Perceptions of urban disadvantaged and non-disadvantaged junior high school students. Unpublished doctoral dissertation. Columbus, Ohio: Ohio State University, 1967.

Phillips, C.W. "Diversity of special groups: Description and needs." In J.E. Wall (ed.), Vocational education for special groups. Washington, D.C.: American Vocational Association, 1976.

Reissman, F. The culturally deprived child. New York: Harper and Row, 1962.

"Reports of the National Advisory Council on Vocational Education, 1969-72." Washington: U.S. Government Printing Office (no publication date on report).

Research and Policy Committee of the Committee for Economic Development. Education for the urban disadvantaged from preschool to employment. New York: Committee for Economic Development, March 1971.

Simcoe, A.L. Vocational equal access research project. Washington, D.C. U.S. Department of Health, Education and Welfare, 1979.

"Summary data: Vocational education, fiscal year 1975." Washington: U.S. Department of Health, Education and Welfare, June 1976.

U.S. Congress. The vocational education act of 1963. Public Law 88-210, 88th Congress, H.R. 4955, 1963.

Wenrick, R.C. and Crowley, R.J. Vocational education as perceived by different segments of the population. Ann Arbor, Michigan: University of Michigan, 1964.